

Arguments/Remarks

Claim 1, the only claim in the application as filed, stands rejected, 35 USC 102(e), as anticipated by Chung et al Patent Application Publication US 2003/0002476 (hereinafter Chung). In response thereto, applicants are canceling claim 1 and presenting new claims 2 – 15 more precisely to recite applicants' invention.

Applicants' invention is directed to an integrated desk top apparatus or end user device that reduces the amount of equipment required on a subscriber's desk or table and which allows telephone service to be provided to the subscriber's telephone either through traditional analog service from a Public Switched Telephone Network (PSTN) or from the Internet as Voice over Packet (VoP) service. A computer device, such as a PC, may be associated and integrated with applicant's integrated desk top apparatus. This is not what Chung teaches or attains. In Chung all communication to the subscriber is only over Internet 110. What Chung teaches and discloses is an Internet call routing system wherein VoP communications can be routed either to a computer voice terminal, e.g., H.323 Terminal 296a, or through the PSTN 106 to the telephone 202a or FAX 204a. There is no suggestion or teaching in Chung of an integrated customer premises system that allows for voice communication to a subscriber telephone in response either to traditional analog voice signals, transmitted over the PSTN, or VoP voice signals, transmitted over the Internet. In Chung all communication is only VoP over the Internet. True the Chung gateway connects to the PSTN to provide analog voice signals to a phone, but that merely emphasizes that in Chung, contrary to applicant's invention, the Chung gateway is not the apparatus that itself allows for both analog and VoP telephone communication from a distant party directly to the subscriber's telephone.

Thus the disclosure and teaching set forth by Chung are very different from applicant's invention. As noted above, Chung's arrangement is a call routing system of at least two gateways which are used to convert analog calls into packet format and then to transmit both these packet-converted analog calls and H.323 calls to a customer over the Internet. The essential teaching of Chung is that a gateway system should be employed for routing telephone calls, whether originated as analog or digital, to the customer. The Chung gateways are centralized devices not located at a user's desktop. An analog telephone user wanting to place a call to the called party must in Chung place the call through the gateway arrangement. This may circumvent some long distance charges by using the Internet as the exchange network, but it has no relevancy to applicant's invention.

Applicants' invention is completely distinct from this gateway teaching and arrangement of Chung. Applicants' invention involves a desktop system that has one or more PSTN interfaces and a data network connection. This allows a user to originate a call or receive a call either as analog or VoP, depending on such matters as the quality and cost of the communication desired. A combination of analog and digital bridges

allows for flexible interconnection to a plurality of ports, and echo cancellers eliminate the acoustic echo from the telephone line interface hybrid and, through the use of forward echo cancellers, echo from the called path's device, which may be a VoP phone which does not generally provide good acoustic echo control.

Through applicants' unique combination including the digital and analog switching and bridging system, flexible call features, such as conferencing PSTN and VoP calls, transferring a call from either interface to the other, and placing calls on hold are provided. Further, in accordance with embodiments of applicants' invention, a local PC can be integrated with the desk top system. Integration with the PC also allows for PC-based telephony applications and PC-based VoP call control applications. Finally, other significant advantages attained by applicants' invention include that it supports Type 1 and Type 2 Caller ID on the analog PSTN interfaces and that it enables call progress signal and ring cadence discrimination.

In rejecting prior claim 1 the Examiner pointed to the Chung PSTN 106 as equivalent to applicants' PSTN 102 and to the Chung Internet 110 as equivalent to applicants' Internet 104. Applicants' respectfully submit that this is in error as in Chung the Internet 110 carries all of the input telephone communication from the distant party and the PSTN 106 is, in fact, merely an output of the Chung routing system.

Applicants' new claims recite specifically various combinations of the components of their system which allow for this completely different and distinct operation from the Chung routing system. Thus applicants' invention includes an analog interface for receiving the external analog signals, as from the PSTN, and connecting them to an analog call processor, a digital interface for receiving external VoP signals and connecting them to a VoP call processor, and a switching and bridging system for connecting one or both of the analog and VoP telephone calls to appropriate customer devices. In Chung a gateway converts all calls to packet, determines which counterpart gateway it should send the packets to, and then transmits the telephone calls, as packets, through a packet network. As recited in claim 2, applicants' invention is an end user device that permits calls to be originated and received directly over both the PSTN and a packet network, enabling functions such as call conferencing, transfer and hold not suggested or described in Chung's gateway system. The power and flexibility of applicants' invention, as recited in new claim 2, enables such further functions as on-hook and off-hook caller ID services being supported for both the analog and the VoP calls and call progress signal detection and ringing cadence discrimination being performed.

In applicants' invention the customer audio devices, such as the customer telephones, are a part of their integrated customer premise equipment and are not reached by further transmission through the PSTN, as in Chung. Further in Chung the Chung IP call routing system 214 is not connected, as recited in applicants' new claim 2, to both an analog call processor and VoP call processor for connecting one or both of said analog and digital VoP telephone calls to the customer's audio devices.

The new dependent claims further recite specific elements of applicants' inventive combination, which elements are not to be found in or suggested by Chung because of the completely different functions and purposes of Chung, and applicants' new claim 3 recites that the digital interface provide either LAN or modem functionality. Chung neither discloses or suggests this nor does Chung disclose or suggest an analog interface which includes an analog front-end, as recited in new claim 4, nor that the switching and bridging system including an analog switch and bridge, an audio codec, a digital switch and bridge, as recited in new claim 5. New claim 6 further recites that the switching and bridging system include a plurality of echo cancellers, with new claim 7 specifying that these echo cancellers include forward echo cancellers.

New dependent claim 8 is directed to the specific details of their switching and bridging system, namely including the individual switch and adder elements included in both the analog switch and bridge and the digital switch and bridge, as depicted in applicants' Fig. 5 and described at page 11, line 13 et seq.

With respect to new claim 9, Chung does not disclose an audio codec which interconnects the analog switch and bridge and the digital switch and bridge in applicants' switching and bridging system.

New dependent claim 10 further recites a plurality of input/output devices, e.g., LCD display 122 and Hard Key-Pad 124, and an application controller, e.g., 110, connected to both the input/output devices and the analog and VoP telephone processors.

New claims 11 and 12 are directed to applicants' invention wherein multiple VoP telephone calls or multiple analog telephone calls can be handled simultaneously by applicants' inventive integrated customer premise system.

New independent claim 13 and dependent claims 14 and 15 are directed to the embodiments of applicants' invention comprising the combination of applicants' integrated customer premise system and a computing device connected to a command processor in the customer premise system, with details of the apparatus of the computing device being set forth in the dependent claims. Clearly, Chung has no relevance to such a combination.

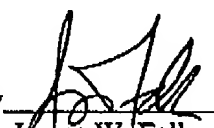
The other references cited by the Examiner but not applied, Feinberg patent 6,798,745 and Tuomi Patent Application Publication US 21002/0110112, are even more remote and less relevant to applicants' invention.

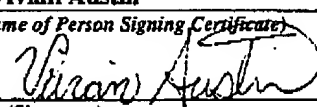
Accordingly, applicants respectfully submit that new claims 2 through 15 are clearly patentable, and their favorable consideration and allowance are requested.

It is believed that this application is now in condition to be passed to issue, and such action is also requested. However, if the Examiner deems it would in any way expedite the prosecution of this application, he is invited to telephone applicants' attorney at the number set forth below.

Respectfully submitted,

Stanley Pietrowicz et al

By 
James W. Falk
Attorney for Applicants
Reg. No. 16,154
(732) 669-4465

CERTIFICATE OF TRANSMISSION BY FACSIMILE (37 CFR 1.8)			Docket No. APP 1318
Applicant(s): S. Pietrowicz et al			
Application No. 09/911,297	Filing Date July 23, 2001	Examiner CHOU, Albert T.	Group Art Unit 2662
Invention: Interconnecting Voice-Over-Packet and Analog Telephony at a Desktop			
<p>I hereby certify that this <u>Amendment (8 pages)</u> <small>(Identify type of correspondence)</small></p> <p>is being facsimile transmitted to the United States Patent and Trademark Office (Fax. No. <u>(703) 872-9306</u>)</p> <p>on <u>April 15, 2005</u> <small>(Date)</small></p> <div style="text-align: right; margin-top: 100px;"> <p>Vivian Austin <small>(Typed or Printed Name of Person Signing Certificate)</small></p>  <small>(Signature)</small> </div>			
<p>Note: Each paper must have its own certificate of mailing.</p>			